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09/421,275	10/20/1999	TATSUYA WATANUKI	ASA-827	3896

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[REDACTED] EXAMINER

JONES, PRENELL P

[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

2667

DATE MAILED: 09/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No. 09/421,275	Applicant(s) Watanuki et al
Examiner Prenell Jones	Art Unit 2667

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

1)  Responsive to communication(s) filed on Oct 20, 1999.

2a)  This action is FINAL.      2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

### Disposition of Claims

4)  Claim(s) 1-14 is/are pending in the application.

4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-4, 9, and 11-14 is/are rejected.

7)  Claim(s) 5-8 and 10 is/are objected to.

8)  Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)  The proposed drawing correction filed on \_\_\_\_\_ is: a)  approved b)  disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.

12)  The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

13)  Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)  All b)  Some\* c)  None of:

1.  Certified copies of the priority documents have been received.
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

14)  Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a)  The translation of the foreign language provisional application has been received.

15)  Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

1)  Notice of References Cited (PTO-892)

2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)  Information Disclosure Statement(s) (PTO-1449) Paper No(s). 4

4)  Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_

5)  Notice of Informal Patent Application (PTO-152)

6)  Other:

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***Claim Rejections - 35 U.S.C. § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2, 3 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding claims 2 and 3, Applicant is claiming “rewrites a message of said certain level in the received multicast message into a message of said other level having an *equivalent meaning*” which is unclear to Examiner exactly what Applicant is claiming. Regarding claim 9, Applicant is claiming “a multicast protocol message of the other of said second and third layers in the OSI reference model, the multicast protocol message of said other layer into all said plurality of multicast protocol messages of said one layer” which is unclear to Examiner as to what Applicant is claiming. Examiner question if Applicant has left some words out of claim.

***Claim Rejections - 35 U.S.C. § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 11, 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guarneri et al in view of Donahue et al and Acharya et al. .

Regarding claims 1, 11, 12 and 14, Guarneri discloses (Abstract, Fig. 10 & 20, col. 2, line 38 thru col. 6, line 54, col. 8, line 43 thru col. 10, line 47, col. 12, line 67) a satellite transmitter-receiver switching system wherein the architecture includes switching office (relay) surrounded by a plurality of networks/subscribers communicating (col. 5, line 60 thru col. 6, line 11) broadcast and multicast protocols with acknowledgments, (col. 9, line 12-14) wherein the switching system is generic (general purpose), transmission/reception of ATM cells, (col. 10, line 15-67), (col. 12, lines 51-67) performs protocol conversion associated with data link layer, application layer, and additional layers, plurality of receiving stations. Guarneri is silent on a converting a multicast message of a certain layer level to multicast message of another layer level. However,

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in analogous art, Donahue discloses a (Abstract, col. 11, line 27 thru col. 12, line 67) multicast access associated with a satellite system wherein the architecture includes the transmission of multicast protocols to plurality of devices/networks, router for routing data to multiple devices/networks, and constant conversion form one form to another (protocol layer levels) and Acharya discloses (Abstract, Fig. 9, col. 1, line 17-26, col. 2, line 15-22, col. 3, line 22-29) ~~discloses~~ that it is well known in the art that a typical network consist of several layers wherein different communication protocols are used, conversion and transfer operations by converting a network address of an IP packet or a packet formed in accordance with a protocol of a different layer, the IP is used to carry out transmission at the network layer, (col. 3, line 22-29) during multicast operation using protocols like IP multicast protocol is transferring protocols packets for communicating among a plurality of nodes, (col. 3, line 47-54) multicast routing server coupled to multiple devices/networks. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have been motivated to implement in a satellite system, converting multicast protocol from one layer to another layer as taught by Donahue and Acharya with the teachings of Guarneri's satellite communication system for the purpose of providing appropriate transmission technology with the associated transmission equipment.

5. Claims 4 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guarneri et al, Donahue et al and Acharya et al as applied to claims 1 and 11, 12 and 14 above, and further in view of that which is know in the art.

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Regarding claims 4 and 13, as indicated above, Regarding claims 1, 11, 12 and 14, Guarneri discloses (Abstract, Fig. 10 & 20, col. 2, line 38 thru col. 6, line 54, col. 8, line 43 thru col. 10, line 47, col. 12, line 67) a satellite transmitter-receiver switching system wherein the architecture includes switching office (relay) surrounded by a plurality of networks/subscribers communicating (col. 5, line 60 thru col. 6, line 11) broadcast and multicast protocols with acknowledgments, (col. 9, line 12-14) wherein the switching system is generic (general purpose), transmission/reception of ATM cells, (col. 10, line 15-67), (col. 12, lines 51-67) performs protocol conversion associated with data link layer, application layer, and additional layers, plurality of receiving stations, Donahue discloses a (Abstract, col. 11, line 27 thru col. 12, line 67) multicast access associated with a satellite system wherein the architecture includes the transmission of multicast protocols to plurality of devices/networks, router for routing data to multiple devices/networks, and constant conversion form one form to another (protocol layer levels) and Acharya discloses (Abstract, Fig. 9, col. 1, line 17-26, col. 2, line 15-22, col. 3, line 22-29) discloses that it is well known in the art that a typical network consist of several layers wherein different communication protocols are used, conversion and transfer operations by converting a network address of an IP packet or a packet formed in accordance with a protocol of a different layer, the IP is used to carry out transmission at the network layer, (col. 3, line 22-29) during multicast operation using protocols like IP multicast protocol is transferring protocols packets for communicating among a plurality of nodes, (col. 3, line 47-54) multicast routing server coupled to multiple devices/networks. Guarneri, Donahue and Acharya are silent on

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converting a multicast protocol message of a third layer to a multicast protocol message of a second layer. However, Examiner takes official notice that it is known in the art that with regards to the communication associated with OSI layers that a signaling/network (layer 3) is performed before data link transport (level 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement convert a multicast protocol message of a third layer to a multicast protocol message of a second layer, which is known to one of ordinary skill in the art, with the combined teachings of Guarneri, Donahue and Acharya for the purpose of successfully completing the transmission of multicast information in a switching environment that serves multiple networks/users.

***Allowable Subject Matter***

6. Claims 5-8 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: Although the prior art teaches transmission/receiving of multicast protocol data associated with communicating among multiple devices via a switch and whereby protocol conversion is utilized for providing successful data transmission, the cited art does not teach wherein the protocol conversion unit rewrites a multicast address of a certain level in the received multicast message

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into a multicast message of another level in the OSI reference mode by use of the prefix portion of the corresponding multicast address in said multicast address memory, and a second layer is GMRP, and the third level is IGMP, DVMRP, PIM-SM, PIM-DM, MOSPF, CBT or MLD of IPv6.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prenell Jones whose telephone number is (703) 305-0630. The examiner can normally be reached on Monday thru Friday from 9:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham, can be reached on (703) 305-4378. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Prenell Jones *PJ*  
September 3, 2003

*Chi Pham*  
CHI PHAM  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600 9/4/03